Abstract.

A method for depositing dielectric material into gaps between wiring lines in the formation of a semiconductor device includes the formation of a cap layer and the formation of gaps into which high density plasma chemical vapor deposition (HDPCVD) dielectric material is deposited. First and second antireflective coatings may be formed on the wiring line layer, the first and second antireflective coatings being made from different materials. Both antireflective coatings and the wiring line layer are etched through to form wiring lines separated by gaps. The gaps between wiring lines may be filled using high density plasma chemical vapor deposition.